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THE NEW TECHNOLOGY OF TEACHER TRAINING.

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DESIGNED TO GIVE INFORMATION ABOUT THE USE OF CLOSE-CIRCUIT TELEVISION AND VIDEOTAPE IN TRAINING PROGRAMS FOR LANGUAGE TEACHERS, THIS BRIEF DOCUMENT DISCUSSES THEIR OPERATION AND POTENTIAL AND DESCRIBES SPECIFIC PLANS FOR QUARTERS, EQUIPMENT, AND PERSONNEL. INCLUDED IN THE FIRST SECTION ON QUARTERS AND EQUIPMENT ARE DESCRIPTIONS OF THE SPECIFICATIONS FOR A WELL-DESIGNED TEACHING STUDIO, CONTROL ROOM, AND SCREENING THEATER. IN TWO BRIEFER SECTIONS ARE ACCOUNTS OF PERSONNEL NEEDS AND OPERATION FEATURES. CONCLUDING REMARKS JUSTIFY THE USE OF THIS NEW TRAINING PROCESS AS ECONOMICALLY, TECHNICALLY, AND PEDAGOGICALLY SOUND. SEE FL 000 638 FOR A COMPANION DOCUMENT. (AB)

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The New Technology of Teacher Training

William F. Mackey

In various parts of the world, investigations into what is wrong with language teaching invariably conclude that the greatest and most immediate need is for good language teachers and more of them. It is sometimes suggested that television might be of some use.

Less than half a century of television has already brought about a revolution in the field of mass-communication; but it is only now that we are beginning to realize the sort of changes which it could engender in other fields of activity. Among these is the field of education; here the mass-communication capacities of the medium are already being exploited.

INTRODUCTION

Although television was invented for the purpose of transmitting images over long distances, it is now being used at close quarters in industry and education.

In the field of teacher-training, it is gradually taking the place of in-service classroom observation. By the use of concealed remote-control zoom lenses, it is possible for a large audience of teachers in training to observe what is going on in a demonstration classroom without disturbing the learners or the performing teacher. As important as this may seem, it is not nearly as significant as the facilities which television provides in recording the actions and sounds of the lesson. This is done by means of videotape.

It is really the videotape rather than live television which is revolutionizing our techniques of teacher training. For videotape makes it possible for anyone to observe a lesson any time and anywhere, to see it again and again for purposes of analysis either by the observers or by the very teacher who taught the lesson. Indeed, this self-analysis, this possibility of watching oneself teach, of stopping one's movements in order to listen to the comments of more experienced teachers is one of the most significant developments in the technology of teacher training.

In order to integrate this new instrument into a teacher training course, one must plan for proper quarters, equipment and personnel and have some idea of the capacity and operation of close-circuit television and videotape.

1. QUARTERS AND EQUIPMENT

To begin with, at least three adjoining rooms are needed, preferably on the same side of the corridor. One of these rooms serves as a teaching studio, another as a screening theatre and a third as a control room.

1.1 The Teaching Studio

This room must be large enough to seat comfortably a small class of less than twenty, and to permit various seating arrangements.

For this purpose, a square-shaped room is preferable. In diagonally facing corners are placed two concealed remote-controlled cameras with zoom lenses, connected with the panel in the control room. One or two movable, manually operated floor cameras may be added if more detail is required. On the ceiling, are auxiliary lighting fixtures and suspended microphones to permit free movement. The technical quality of the end product depends on the number and distribution of lights and cameras and the skill with which they are manipulated.

Use of the floor space depends on the type of teaching being done. For the type where learners are expected to move around, light, simple chairs are preferable; these may be arranged in horse-shoe or hollow square formation, with a demonstration table in the middle. If students are not expected to move around, an arrangement of benches in tiers, one higher than the other, makes it easy for the camera to zoom in on individual learners.

A number of teaching studios can operate at the same time. With the proper cable connections, they may be located anywhere in the area, and each may be devoted to a different method, course or level.

For audio-visual methods, a rear projection-screen is necessary, with a remote-control mechanism in the teaching studio, to permit the teacher to control the pictures he uses. The motor of the film-strip projector may be synchronized with the tape-recorder, and both operated simultaneously by the demonstration teacher. One of the cameras is focused on the rear-projection screen, so that the viewers may see what the learners are looking at. It is technically preferable, however, if this picture can be reflected directly into an auxiliary camera, making the picture appear on one of the monitoring screens of the panel in the control room.

For motion-picture methods, a videotape of the film is pre-recorded and a television screen is used instead of the motion-picture screen, in the studio class. This permits the studio teacher to select the sequences by remote-control.

1.2 The Control Room

This may be a single room or a suite of rooms, depending on accommodation. It contains the electronic television equipment; if transistorized, this may take up very little space. Connected with this, are tape-decks and turn-tables for dubbing in comments and recorded material. There is also the control deck, with switches for operating the remote-controlled cameras, and selecting the picture to be recorded on the videotape. The possible choice of pictures appears on the monitoring screens facing the operator.

In the same room, or in an adjoining room, are the videotape machines on which the selected pictures are recorded. In this same room, or in still another room, is the graphics section, with a small printing set for titles and sub-titles, using white ink on black cardboard for main titles, and black on transparent cellophane for superimposed sub-titles.

1.3 The Screening Theatre

This is a room with rows of seats facing one or more television screens. It is used for observation of live programmes and for the study of the videotapes.

If a small number of viewers is involved, one television receiver is sufficient; if a large number is involved, more than one set will be necessary. If there are sufficient cable connections, other screens may be placed in separate rooms and located anywhere in the area. If only one large room is available, there is the possibility of projecting the television pictures on a motion-picture screen by use of a telebeam.

2. PERSONNEL

It is advisable to begin with at least one full-time technician with experience in television work.

Students may be trained to operate the mobile floor cameras. But the control-panel should be operated by an experienced teacher-trainer, since this is the person who decides what goes on the

videotape, that is, what he wants his trainees to see. With practice, he can become quite skilled in operating the remote-controlled lens. He must be prepared to work closely with the demonstration teachers and the technician.

3. OPERATION

In order that the teacher-trainer may produce the sort of video-tape he requires, there must be continual feedback between the studio and the control room. The man at the control panel must keep in contact with the mobile camera operators, if any, and also with the teacher. The teacher can number items in his teaching plan and signals these to the operator, with his hands behind his back, at the moment where he begins a new section of the plan. This permits the direct interpolating of sub-titles, thus saving time-consuming montage at a later stage.

CONCLUSION

From this description of teacher training through videotape, it may appear that such a process is too complex and time-consuming to be effective. As a matter of fact, we have found that it is much less time-consuming than class visits, less time-wasting, more efficient and more effective, since it permits us to do much more actual training in much less time. It is also more economic-al in the long-run, since the same demonstrations can be used again and again, for many sessions, for many terms, and for many differ-ent groups of trainees [1]. Copies, when they become cheaper, may be made for a number of teacher training centers.

It must be remembered that, at this stage of development, the detailed analysis which the procedure permits, the detailed descriptions of what is now done, is no indication of what should or can be done. Yet, it at least establishes a basis for a weighting of the complex variables in language teaching by enabling us to study the effects of teaching on the actual learning of the language [2]. For such a use of videotape enables us to improve the

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1. W.F. Mackey, Practice Teaching: Models and Modules (in the press).

2. W.F. Mackey, The Quantification of Teaching Analysis (in the press).

teaching of teachers by observing the learning of learners. It makes it possible for us to measure, evaluate and modify what the teacher does. And, it permits the teacher to better his teaching by enabling him to examine it.

The most fundamental change, however, brought about by the use of videotape is in the very concept of a language lesson. It need no longer to be considered as something evanescent; it can now share that element of permanence common to all documents. The lesson as a document can thus be preserved, filed, studied and analysed.

Because of this, it is now possible for us to preserve not only the uncertain attempts of teachers in training, but also the best from the repertoire of great language teachers, to serve as models for later generations.